

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Claims 1-22 (canceled)

23. (currently amended) A character string text search method, comprising:
receiving plural character string text search requests including corresponding search variables from a plurality of terminal devices;
combining the requests into a combined retrieval pattern including the search variables of the requests; and
performing a search using the combined retrieval pattern.

24. (currently amended) A character string text search method, comprising:
receiving plural character string text search requests including corresponding search variables from a plurality of terminal devices;
storing the variables in a correspondence table with corresponding search request identifiers;
combining the requests into a combined retrieval pattern including the search variables of the requests;
performing a search using the combined retrieval pattern; and
providing search results for the search requests responsive to the contents of the table.

25. (new) A pattern retrieving method for use with a pattern retrieval apparatus connected to a plurality of terminal devices through a network, comprising:
receiving, from a terminal apparatus, a search condition set that comprises a search-pattern and a search-formula and is used when searching through data constituting a search target, together with a terminal apparatus identifier that identifies the terminal apparatus associated with a search condition set;
storing search condition sets and terminal apparatus identifiers received from one or more of the terminal apparatuses into a search-condition buffer; and when investigating and determining that no preceding search-process is in progress and that two or more search-

patterns are same as each other among those stored in the search-condition buffer;

leaving a first of the same search-patterns in the search-condition buffer and erases second and further ones being same to the first one;

generating a search-pattern-variable table containing and correlating the search-pattern and a first variable that makes the search-pattern an associated value;

further generating a search-query-formula-variable table containing and correlating, in a manner based on search-formulas and the terminal apparatus identifiers stored in the search-condition buffer and the generated search-pattern-variable table,

a first search-query formula describing the search-pattern in a form using the first variable; and

a second variable that makes the first search-query formula the associated value and further correlating the terminal apparatus identifier with a second search-query-formula describing the first search-query-formula-in a form using the second variable and the second variable that makes the first search-query-formula the associated value, and searching through a search-target database containing said data of the search-target according to the search-query-formula-variable table for extracting a data set that matches with the search condition set received from any of the plurality of terminal apparatuses as a search result;

and transmitting the search result back to a relevant terminal apparatus.

26. (new) The method according to claim 25, wherein said search condition buffer stores the search condition until it is determined that a retrieving process is completed.

27. (new) The method according to claim 25, wherein said search condition buffer stores the search condition until a predetermined time is reached or a predetermined capacity is filled.

28. (new) The method according to claim 25, wherein retrieval performed by the retrieval apparatus includes simultaneously retrieving a plurality of retrieval patterns.

29. (new) The method according to claim 25, wherein retrieval performed by the retrieval apparatus is performed in one of an Aho-Corasick

(AC) method, an Expanded-Boyer-Moore (EBM) method, and a Shinohara-Arikawa (SA) method.

30. (new) A pattern retrieval apparatus connected to a plurality of terminal devices through a network, comprising:

a retrieval condition reception unit, receiving, from a terminal apparatus, a search condition set that comprises a search-pattern and a search-formula and is used when searching through data constituting a search target, together with a terminal apparatus identifier that identifies the terminal apparatus associated with a search condition set;

a retrieval condition buffer unit, storing search condition sets and terminal apparatus identifiers received from one or more of the terminal apparatuses into a search-condition buffer;

a retrieving process determination unit for investigating and when determining that no preceding search-process is in progress and that two or more search-patterns are same as each other among those stored in the search-condition buffer, leaving a first of the same search-patterns in the search-condition buffer and erasing second and further ones being same to the first one;

a variable table generating unit generating a search-pattern-variable table containing and correlating the search-pattern and a first variable that makes the search-pattern an associated value and further generating a search-query-formula-variable table containing and correlating, in a manner based on search-formulas and the terminal apparatus identifiers stored in the search-condition buffer and the generated search-pattern-variable table,

a first search-query formula describing the search-pattern in a form using the first variable; and

a second variable that makes the first search-query formula the associated value and further correlating the terminal apparatus identifier with a second search-query-formula describing the first search-query-formula-in a form using the second variable and the second variable that makes the first search-query-formula the associated value, and searching through a search-target database containing said data of the search-target according to the search-query-formula-variable table for extracting a data set that matches with the search condition set received from any of the plurality of terminal apparatuses as a search result; and

a transmission unit transmitting the search result back to a relevant terminal apparatus.

31. (new) The apparatus according to claim 30, wherein said search condition buffer unit stores the search condition until said retrieving process determination unit determines that a retrieving process is completed.
32. (new) The apparatus according to claim 30, wherein said search condition buffer unit stores the search condition until a predetermined time is reached or a predetermined capacity is filled.
33. (new) The apparatus according to claim 30, wherein said retrieval condition buffer unit simultaneously retrieves a plurality of retrieval patterns.
34. (new) The apparatus according to claim 30, wherein said search condition buffer unit operates according to one of an Aho-Corasick (AC) method, an Expanded-Boyer-Moore (EBM) method, and a Shinohara-Arikawa (SA) method.
35. (new) A computer-readable storage medium storing a program code of a pattern retrieval program executed by a pattern retrieval apparatus connected to a plurality of terminal devices through a network, said program code comprising:
- receiving, from a terminal apparatus, a search condition set that comprises a search-pattern and a search-formula and is used when searching through data constituting a search target, together with a terminal apparatus identifier that identifies the terminal apparatus associated with a search condition set;
 - storing search condition sets and terminal apparatus identifiers received from one or more of the terminal apparatuses into a search-condition buffer; and when investigating and determining that no preceding search-process is in progress and that two or more search-patterns are same as each other among those stored in the search-condition buffer
 - leaving a first of the same search-patterns in the search-condition buffer and erases second and further ones being same to the first one;
 - generating a search-pattern-variable table containing and correlating the search-pattern and a first variable that makes the search-pattern an associated value;
 - further generating a search-query-formula-variable table containing and correlating, in a manner based on search-formulas and the terminal apparatus identifiers stored in the search-condition buffer and the generated search-pattern-variable table,
 - a first search-query formula describing the search-pattern in a form using the first

variable; and

a second variable that makes the first search-query formula the associated value and further correlating the terminal apparatus identifier with a second search-query-formula describing the first search-query-formula-in a form using the second variable and the second variable that makes the first search-query-formula the associated value, and searching through a search-target database containing said data of the search-target according to the search-query-formula-variable table for extracting a data set that matches with the search condition set received from any of the plurality of terminal apparatuses as a search result; and

transmitting the search result back to a relevant terminal apparatus.

36. (new) The storage medium according to claim 35, wherein said search condition buffer stores the search condition until it is determined that a retrieving process is completed.

37. (new) The storage medium according to claim 35, wherein said search condition buffer stores the retrieval condition until a predetermined time is reached or a predetermined capacity is filled.

38. (new) The storage medium according to claim 35, wherein a plurality of retrieval patterns are simultaneously retrieved.

39. (new) The storage medium according to claim 35, wherein retrieval is performed in one of an Aho-Corasick (AC) method, an Expanded-Boyer-Moore (EBM) method, and a Shinohara-Arikawa (SA) method.

40. (new) A pattern retrieval system in which a plurality of terminal devices and a pattern retrieval apparatus are connected through a network, wherein:

each of said plurality of terminal devices comprises:

a terminal device side transmission unit transmitting a search condition containing a search pattern for data to be searched and a search formula together with terminal device information for designating each terminal device;

said pattern retrieval system comprises:

a retrieval target data storage unit storing data to be searched;

a retrieval condition reception unit receiving a retrieval condition, transmitted from each terminal device side transmission unit of said plurality of terminal devices together with the terminal device information for designation of each of the terminal devices, including a retrieval pattern and a retrieval expression for retrieval of the data to be searched;

a retrieval condition buffer unit storing the retrieval condition and the terminal device information received by said retrieval condition reception unit;

a retrieving process determination unit determining whether or not a preceding retrieving process is being performed;

a retrieval pattern variable table generation unit generating, when the retrieving process determination unit determines that the preceding retrieving process is not being performed, a retrieval pattern variable table in which a retrieval pattern and a first variable having the retrieval pattern as a value are associated with each other, if there are two or more identical retrieval patterns in the retrieval patterns stored in said retrieval condition buffer units, excluding the retrieval patterns other than one retrieval pattern;

a retrieval request expression variable table generation unit generating a retrieval request expression variable table in which the retrieval request expression indicating the retrieval pattern using the first variable and the second variable having the retrieval request expression as a value are associated, and the retrieval request expression indicating the terminal device information and the retrieval expression using the second variable and the second variable having the retrieval request expression as a value are associated based on the retrieval expression and the terminal device information stored in said retrieval condition buffer unit, and the retrieval pattern variable table generated by said retrieval pattern variable table generation unit;

a retrieval unit extracting a retrieval result matching the retrieval condition transmitted from each of the plurality of terminal devices by searching said retrieval target data storage unit according to the retrieval request expression variable table generated by said retrieval request expression variable table generation unit; and

a transmission unit transmitting the retrieval result extracted by said retrieval unit to each of the plurality of terminal devices; and

each of said plurality of terminal devices further comprises a terminal device side reception unit receiving the result transmitted by said transmission unit.

41. (new) A pattern retrieval program executed by a pattern retrieval apparatus connected to a plurality of terminal devices through a network, comprising:

receiving, from a terminal apparatus, a search condition set that comprises a search-pattern and a search-formula and is used when searching through data constituting a search target, together with a terminal apparatus identifier that identifies the terminal apparatus associated with a search condition set;

storing search condition sets and terminal apparatus identifiers received from one or more of the terminal apparatuses into a search-condition buffer; and when investigating and determining that no preceding search-process is in progress and that two or more search-patterns are same as each other among those stored in the search-condition buffer

leaving a first of the same search-patterns in the search-condition buffer and erases second and further ones being same to the first one,

generating a search-pattern-variable table containing and correlating the search-pattern and a first variable that makes the search-pattern an associated value;

further generating a search-query-formula-variable table containing and correlating, in a manner based on search-formulas and the terminal apparatus identifiers stored in the search-condition buffer and the generated search-pattern-variable table,

a first search-query formula describing the search-pattern in a form using the first variable; and

a second variable that makes the first search-query formula the associated value and further correlating the terminal apparatus identifier with a second search-query-formula describing the first search-query-formula-in a form using the second variable and the second variable that makes the first search-query-formula the associated value, and searching through a search-target database containing said data of the search-target according to the search-query-formula-variable table for extracting a data set that matches with the search condition set received from any of the plurality of terminal apparatuses as a search result; and

transmitting the search result back to a relevant terminal apparatus.

42. (new) The pattern retrieval program according to claim 41, wherein said search condition buffer stores the search condition until it is determined that a retrieving process is completed.

43. (new) The pattern retrieval program according to claim 41, wherein said search condition buffer stores the search condition until a predetermined time is reached or a predetermined capacity is filled.

44. (new) The pattern retrieval program according to claim 41, wherein a plurality of retrieval patterns are simultaneously retrieved.

45. (new) The pattern retrieval program according to claim 41, wherein retrieval is performed according to one of an Aho-Corasick (AC) method, an Expanded-Boyer-Moore (EBM) method, and a Shinohara-Arikawa (SA) method.

46. (new) A pattern retrieval apparatus connected to a plurality of terminal devices through a network, comprising:

a retrieval condition reception means, receiving, from a terminal apparatus, a search condition set that comprises a search-pattern and a search-formula and is used when searching through data constituting a search target, together with a terminal apparatus identifier that identifies the terminal apparatus associated with a search condition set;

a retrieval condition buffer means, storing search condition sets and terminal apparatus identifiers received from one or more of the terminal apparatuses into a search-condition buffer;

a retrieving process determination means for investigating and when determining that no preceding search-process is in progress and that two or more search-patterns are same as each other among those stored in the search-condition buffer, leaving a first of the same search-patterns in the search-condition buffer and erasing second and further ones being same to the first one,

a variable table generating means generating a search-pattern-variable table containing and correlating the search-pattern and a first variable that makes the search-pattern an associated value and further generating a search-query-formula-variable table containing and correlating, in a manner based on search-formulas and the terminal apparatus identifiers stored in the search-condition buffer and the generated search-pattern-variable table,

a first search-query formula describing the search-pattern in a form using the first variable; and

a second variable that makes the first search-query formula the associated value and further correlating the terminal apparatus identifier with a second search-query-formula describing the first search-query-formula-in a form using the second variable and the second variable that makes the first search-query-formula the associated value, and searching through a search-target database containing said data of the search-target according to the search-query-formula-variable table for extracting a data set that

matches with the search condition set received from any of the plurality of terminal apparatuses as a search result; and
a transmission means transmitting the search result back to a relevant terminal apparatus.